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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,492	11/09/2006	Jean-Marc Hougard	0508-1097-1	9225
466 7590 YOUNG & THOMPSON 209 Madison Street Suite 500 Alexandria, VA 22314			EXAMINER BROWN, COURTNEY A	
			ART UNIT 1617	PAPER NUMBER
			NOTIFICATION DATE 12/14/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

### Office Action Summary

**Application No.**

10/588,492

**Applicant(s)**

HOUGARD ET AL.

**Examiner**

COURTNEY BROWN

**Art Unit**

1617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) 9,11 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10,12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date 8/4/06

## **DETAILED ACTION**

### ***Election/Restriction***

Applicant's election without traverse of Group I, comprising claims 1-2 and 4-14 and the election of pirimiphos-methyl (i.e., O-[2-(dimethylamine)-6-methyl-4 pyrimidinyl] O,O-dimethyl phosphorothioate) as the insecticide component and DEET (i.e., N,N-diethyl-meta-toluidine) as the insect repellent component in the reply filed on November 8, is acknowledged. It is noted that while Applicant elected the claims of Group I (i.e., claims 1-2 and 4-14), claims **1-2,4-8,10 and 12-13** read on the elected species.

### ***Status of Claims***

Claims 1-2 and 4-15 are pending in the application.. Claim 3 was cancelled in a preliminary amendment filed August 4, 2006. Claims 9,11 and 14 have been withdrawn as being directed to a non-elected invention. Claims **1-2, 4-8, 10 and 12-13** are being examined for patentability.

### ***Priority***

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e), 119(a-d), or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. This application is a 371 of PCT/FR05/00262 filed on February 4, 2005 which claims benefit of US Application 60/541,930 filed on February 6, 2004.

***Information Disclosure Statement***

The Information Disclosure Statements (IDS) submitted on August 4, 2006 has been considered by the examiner.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-4, 4-8, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karl et al. (US Patent Application 2005/0132500A1) and/or Skovmand (WO 01/37662 A1, submitted by Applicant on August 4, 2006) in view**

**of Institut de recherché pour le development, IRD (*Synergy between insecticide and repellent to combat malaria-carrying mosquitoes*, January 2001).**

### **Applicant's Invention**

Applicant is claiming products containing at least one non-pyrethroid insecticide and at least one insect repellent, the concentration of the insecticide in the product being lower than its lethal concentration 100 (LC100) when it is used alone, and the concentration of the insect repellent in the product being lower than the concentration of the insect repellent procuring a maximum repellent effect when it is used alone, as combination products for a use that is simultaneous, separated or spread over time in the preparation of an insecticide composition.

### **Determination of the scope and the content of the prior art (MPEP 2141.01)**

Karl et al. teach an insecticide composition for application to a textile material or plastics material wherein the composition comprises a mixture of at least one insecticide and/or at least one repellent (claim 1 of Karl et al.). The insecticide is selected from organophosphorous compounds such as pirimiphos-ethyl and piriphos-methyl (claim 4 of Karl et al., elected insecticide and limitation of instant claims **1 and 7**) and the repellent is selected from compounds such as N,N-Diethyl-meta-toluamine (i.e., DEET, claim 4 of Karl et al. and elected repellent and limitation of instant claims **1,8 and**

**10).** The composition comprises from about 0.001 to 95% by weight of the insecticide and/or repellent (claim 7 of Karl et al., limitation of instant claim **6**). Karl et al. teach impregnated textile material and a process for the impregnation of textile material which may be in the form of garments such as socks, trousers, shirts, etc. and nettings which are used for mosquito nets or covering (see claims 13 and 14 of Karl et al. and [0068], limitation of instant claims **12 and 14**).

Skovmand teaches an impregnated netting or fabric for insect or tick and/or repellence of an insect or tick comprising an insecticide and/or a repellent wherein the insecticide is selected from organophosphorous compounds such as pirimiphos-ethyl and piriphos-methyl (claims 1 and 8 of Skovmand, elected insecticide and limitation of instant claims **12 and 14**) and the repellent is selected from compounds such as N,N-Diethyl-meta-toluamine (i.e., DEET, also claims 1 and 8 of Skovmand, elected repellent and limitation of instant claims **12 and 14**). Skovmand teaches a process for impregnation of a fabric or netting as well as a composition for impregnation of fabrics comprising the aforementioned insecticide/repellent combination wherein the composition comprises from about 0.001 to 95% by weight of the insecticide and/or repellent (claims 18 and 9 of Skovmand, limitation of instant claims **1, 6-8 and 10**).

**Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)**

The difference between the invention of the instant application and that of Karl et al. and Skovmand is that Karl et al. and Skovmand do not expressly teach that the concentration of the insecticide in the product being lower (i.e., LC20 to LC40, and LC30) than its lethal concentration 100 (LC100), when it is used alone, and that the concentration of the insect repellent in the product being lower than the concentration of the insect repellent procuring a maximum repellent effect and a protective effect when it is used alone (limitation of instant claims **1-2 and 4-5**). However, the prior art teaches that a combination of non-pyrethroid insecticides with a repellent produces synergy and proves to be far more effective than the sum of their respective properties(see attached Institut de recherche pour le developpement, i.e., IRD, reference, limitation of instant claims **1-2 and 4-5**).

### **Finding of prima facie obviousness**

#### ***Rationale and Motivation (MPEP 2142-2143)***

The teachings of Karl et al., Skovmand and IRD are directed to combinations of repellents and non- pyrethroid insecticides. Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to combine the teachings Karl et al., Skovmand and IRD to arrive at products containing at least one non-pyrethroid insecticide and at least one insect repellent wherein the concentration of the insecticide in the product being lower (i.e., LC20 to LC40, and LC30) than its lethal

concentration 100 (LC100), when it is used alone, and that the concentration of the insect repellent in the product being lower than the concentration of the insect repellent procuring a maximum repellent effect and a protective effect when it is used alone. IRD teaches that the excessive or inappropriate use of these mosquitoes nets impregnated with pyrethroid insecticides has led to a worrying increase in the numbers of resistant mosquitoes and the risk that the impregnated nets will lose their efficacy. The IRD reference teaches that in an effort to combine a non-pyrethroid insecticide with a repellent in order to reproduce the same properties as the pyrethroids, a strong synergy was found between insecticides and repellents in a combination. IRD teaches that this combination proves far more effective than the sum of their respective properties. Further, IRD teaches that the efficacy lasted several weeks longer than with each chemical on its own and that the combination proved especially advantageous because it can be used for impregnation at far lower doses than the pyrethroids to achieve the same effectiveness. One would have been motivated to make this combination in order to receive the expected benefit of having products impregnated with low doses of repellents and insecticides that will last longer due to the synergistic combination of the non-pyrethroid insecticide and the repellent. Therefore, given the state of the art as evidenced by the teachings of the cited references, and absent any evidence to the contrary, there would have been a reasonable expectation of success in combining the teachings of the cited references to form products containing at least one non-pyrethroid insecticide in combination with at least one repellent.



In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the teachings of the cited references, especially in the absence of evidence to the contrary.

### **Conclusion**

No claims are allowed.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Fereydown Sajjadi can be reached on 571-272-3311. The fax number

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number for the organization where this application or proceeding is assigned is 571-273-8300.

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